REMARKS

A. Background

Claims 1-194 were pending in the application at the time of the Office Action with claims 3-6, 8, 9, 11-15, 17, 18, 20-33, 35, 36, 38-138, 140, 141, and 143-194 being withdrawn from consideration. Claims 1, 2, 7, 10, 16, 19, and 34 were rejected as being anticipated by cited art. Claims 37, 139, and 142 were rejected as being obvious over cited art. By this response applicant has amended claim 1. As such, claims 1, 2, 7, 10, 16, 19, 34, 37, 139, and 142 are presented for the Examiner's consideration in light of the following remarks.

B. Proposed Claim Amendments

Applicant has herein amended claim 1 to recite:

> wherein said second component includes a region where light confinement is weakened with respect to said optical waveguide and the width of the region is determined such that a diffraction loss in the region becomes smaller than the diffraction loss in the first component, and
>
> wherein the spacing between the first loss component and the region is determined at such a distance that the light passing through the region can reach the first loss component before a leakage of the light at the region completely turns to radiation.

The amendment is supported at least by p. 32, lines 2 - 15 of the specification. In view of the foregoing, applicant submits that the amendments to the claims do not introduce new matter and entry thereof is respectfully requested.

C. Rejection on the Merits

Paragraphs 2 and 3 of the Office Action reject claims 1-2, 7, 10, 16, 19, and 34 under 35 USC § 102(b) as being anticipated by U.S. Patent No. 6,320,888 to Tanaka et al. In view of amendments made to claim 1, applicant respectfully traverses this rejection.

The Office Action refers to the grating 15 of Tanaka as the "second loss component" recited in claim 1 of the present application. However, the grating 15 of Tanaka is used to reflect particular frequencies of the spectrum (e.g., see col. 1, lines 42-45), and does not normally exhibit any diffraction loss. More specifically, applicant submits that Tanaka does not disclose or suggest any region "where light confinement is weakened with respect to said optical waveguide and the width of the region is determined such that a diffraction loss in the region becomes smaller than the diffraction loss in the first component," as recited in amended claim 1.

In the invention as recited in claim 1, the second loss component includes a region to reduce total diffraction loss of an optical waveguide including a loss component (e.g., p. 16, lines 19-22). This can be achieved by reducing the radiation angle of the lightwave at the first loss component (e.g., p. 33, lines 1-4) through adjusting the width of the region in the second loss component and the spacing between the first loss component and the region. As mentioned above, Tanaka neither discloses nor suggests any such region. Thus, the way to reduce total diffraction loss as defined in amended claim 1 is neither disclosed nor obvious from Tanaka. Accordingly, Applicant respectfully requests that the anticipation rejection with respect to amended claim 1 be withdrawn.

Claims 2, 7, 10, 16, 19, and 34 depend from claim 1 and thus incorporate the limitations thereof. As such, applicant submits that claims 2, 7, 10, 16, 19, and 34 are distinguished over the cited art for at least the same reasons as discussed above with regard to claim 1. As such,

Applicant respectfully requests that the anticipation rejection with respect to claims 2, 7, 10, 16, 19, and 34 also be withdrawn.

Paragraphs 4 and 5 of the Office Action rejects claims 37, 139, and 142 under 35 USC § 103(a) as being obvious over the Tanaka patent in view of what the examiner considers to be obvious of one having ordinary skill in the art. Specifically, the Office Action states that Tanaka does not disclose "filling said trench with a material with a specified refractive index," but that "[i]t would have been obvious ... to use a material having a specified refractive index." Applicant respectfully traverses this rejection.

As described above, Tanaka does not disclose or suggest any "region" as defined in amended claim 1. Even if, *arguendo*, Tanaka was modified as recited in the Office Action, it would still not produce the invention as claimed in claim 1. Specifically, the combination would still not disclose or suggest a "region where light confinement is weakened with respect to said optical waveguide and the width of the region is determined such that a diffraction loss in the region becomes smaller than the diffraction loss in the first component," as recited in claim 1. Claims 37, 139, and 142 depend from claim 1 and thus incorporate the limitations thereof. As such, applicant submits that claims 37, 139, and 142 are distinguished over the cited art for at least the same reason as discussed above with regard to claim 1. Applicant thus respectfully requests that the obviousness rejection with respect to claims 37, 139, and 142 be withdrawn.

No other rejections or objections were presented in the Office Action.

C. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited prior art. Most notably, applicant submits

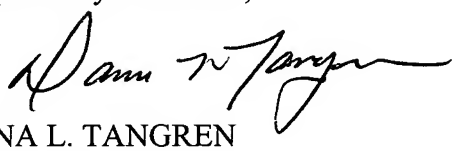
that many if not all of the dependent claims are independently distinguishable over the cited prior art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited prior art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 1, 2, 7, 10, 16, 19, 34, 37, 139, and 142 as amended and presented herein.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 18 day of January 2006.

Respectfully submitted,



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